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SURVEY AND GUIDELINES ON JOINT VENTURE AGREEMENTS AMONG DEVELOPING COUNTRIES IN THE FERTILIZER INDUSTRY

Prepared by

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Foreword

The concept of an industrial Joint Venture (JV) is not a new one. Yet, it is one which has seen relatively few applications in the context of assisting the fertilizer industries of developing countries. By way of comparison, such ventures in the petrochemical industry have proliferated and have often met with significant success over the last two decades.

This paper seeks to analyse the potentials, the problems and the prospects offered by this instrument of co-operation to the fertilizer industries especially of the developing world. It examines the role of industrial joint ventures between the developed and the developing countries, as well as between the developing countries themselves.

The study presents in Chapter I an introduction in which the international climate, with relevance to the operation of JVs, is examined.

This will lead to Chapter II where an overview of recent experiences in international co-operation with the fertilizer industries of the developing world is presented. This review should make apparent the current magnitude and nature of joint venture arrangement in the sector.

Chapter III, analyses the general rationale for industrial Joint Ventures, both from the Local Partner's and Foreign Partner's viewpoints. The major benefits and drawbacks of the concept of JVs is examined here.

Following this evaluation, Chapter IV seeks to identify the major obstacles and potential conflict areas which can develop with the planning, initiation, and progression of the Joint Venture process. In this chapter, the crucial role played by host governments in industrial Joint Ventures is highlighted.

Having examined the theoretical potential and practical problems facing the JV process, Chapter V presents conclusions and a general outlook for Joint Ventures in the fertilizer industry which also leads to the formulation of some general guidelines for joint ventures in the fertilizer industry of developing countries which could contribute to the success of such arrangements in developing countries.

I. Introduction

Historical Background

In examining the role of the industrial Joint Venture (JV) in the arena of international economic relations, it is useful to first make a general appraisal of the international economic environment as this is of direct relevance to this analysis.

Combinations of business interests, motivated by complementary interests or by defensive considerations such as the sharing of business and non-business risks, are nothing new. They were present even before World War I in the form of activity by large European businesses, such as the United Fruit Company, in many developing regions throughout the world. However, three significant features of these older JVs do emerge in contrast to the activity of those after World War II :

1. Earlier associations were almost entirely concerned with trade, mining or agriculture plantation in one form or another.

2. They existed often between partners from the same parent (i.e developed) country, or from different fellow colonial powers.

3. Local involvement in such business ventures was invariably subordinate to the foreign partners.

In the post World War II years, two significant changes were noticeable in the nature and organization of JVs :

1. A diversification of the manufacturing process,

2. The increased participation of local partners.

These features were largely brought about by a combination of two factors. On the one hand there was the arrival of major economic and political counterbalance to the power of the "traditionally" advanced nations. On the other hand, there was the growth of a more permissive political morality based on the changing social and cultural values on the part of the foreign powers which were active in the joint venture process. These have both led to the gradual dismantling of colonial authorities in many former colonies and developing regions. The ex-colonies, through resumed soverign responsiblilty and enhanced political status, have in the last two decades been more forceful in regulating foreign activity and protecting their national interests. This attitude has not been restricted to ex-colonial governments ; rather, it has also been evident in many parts of the developing world. Owing to the relatively fragile nature of their economic base and the limited developed internal resources, many DC governments have been attempting to bridge the gulf between their needs and their ambitions with the assistance of external technology and financial resources. Thus, it is in such a climate that joint ventures in recent years have diversified and integrated both horizontally and vertically along the manufacturing process.

With this background in mind, it is necessary to outline one further aspect of the changing international environment, namely that the climate prevailing in the 1980's and early 1990's is likely to be significantly different to that of the 1960's and 1970's. As such JV agreements

more feasible in the future.

The reasons for this difference are several :

1. The increasing value of developing country resources and markets for expanding TNCs;

2. The implications of TNC risk minimizing strategies;

3. The loss of traditional advantages held by TNCs through monopoly;

4. Increasing world trends towards greater participation;

5. The internationalization of inputs;

6. Increasing business competition.

Firstly, transnational corporations (TNCs) are playing an increasing role overseas and a larger share of their business will take place in the developing regions of the world. The DCs will therefore become more important for raw materials, manufacturing and sales. It would seem that whilst on one hand devloping country markets will no longer be treated as marginal, on the other hand the TNCs are displaying greater caution in every aspect of their involvements, short term or long, in order to safeguard their fundamental corporate interests concerning technology, reputation, quality, goodwill, and their investment return.

Secondly, the TNCs, which are have a valuable technological input to industrial joint venture agreements, are becoming more experienced in risk evaluation and risk minimizing strategies. This has important repercussions for DC governments which are often involved in luring and controlling foreign direct and indirect investment.

Thirdly, it is evident that in the long run, the spread of vital management skills pioneered and refined by Western corporations is inevitable across the international environment. This has been visible especially in the last decade. As a result, the advantages once monopolised by TNCs are being eroded and the corporations may see JVs as a feasible component of their overseas business plans.

Fourthly, a greater awareness and development of many forms of participative management seems probable in the light of the recent international environment. With increasing numbers of DC governments striving for a larger local role in participation and greater local control of foreign ventures, this may force the development of more JVs especially in the developing regions, as the Indian experience has shown.

Fifthly, owing to the increased global economic interdependence, world trade in the form of goods, services and capital, will continue to rise at a rate faster than world production. The implication of this is that the inputs into the manufacturing unit are more likely to be more international. Sales services are expected to follow a similar pattern. In this context there seems to be a feasible place for JV agreements to be enacted.

Sixthly, owing to accelerated development of and structural changes in the developing countries, in addition to the improvement of the market information services outside the TNCs and other manufacturing companies, world trade in goods,services (skills), technology and capital is becoming more competitive. As a result of this climate, the DCs may find more opportunities to form JVs both with the North (advanced nations) and indeed amongst themselves.

As the global economic system becomes ever more intricate in its operation, the old existing problems together with the newly emerging facets are creating new constraints which must be accounted for in any elaboration of international development prospects. Amongst the more important issues are slower growth rates in production, living standards which are either stagnant or growing too slowly, low consumption and investment levels, a structural crisis which is affecting about 25 per cent of the global industrial output, increasing international competitiveness, growing protectionism, spiralling inflation and international monetary difficulties. These factors will exert a considerable influence on the international scenario for atleast the 1980's and early 1990's.

What is an industrial joint venture

A true international industrial joint venture (JV) could be defined as a joint commitment for more than a very short time period (6 months) of funds, facilities, and services by at least two legally independent bodies towards the initialization and sustenance of an industrial enterprise for their mutual (or national) benefit. This relationship has been termed as one of "symbiotic marketing" (L.Adler, Harvard Review 1966), or, the notion of harmonious living together of dissimilar organisms and their joint role in the marketing function. However, the joint ventures as referred to in this paper do not constitute merely a marketing agreement between two corporations and it is for this reason that the term "industrial joint venture" has been used.

A JV in the context of the fertilizer industry is taken to embody a specific industrial or manufacturing process at its core, with the co-operation over the marketing of the JV products being merely one of the components of this process.

Fundamentally, such an international JV should display certain distinct characteristics:

1. It should be a separately incorporated enterprise to its investors (who usually comprise of local and foreign partners).

2. The investors must be from at least two or more countries and commit capital assets to the undertaking.

3. Management responsibilities, risks, and operational control should be shared amongst the partners and usually this reflects the equity share of the joint venture.

4. Neither partner should receive benefits from the enterprise other than through a share of the net earnings.

The parties to the JV may be individuals, corporate bodies, governments or government agencies. In the case of South East Asian JVs, the local partner may often be a host government agency, such as the National Fertilizer Corporation of Pakistan (NFC), whose shares are wholly owned by the Government. The agreements themselves may be either bipartite or multipartite.

What forms may a joint venture take?

There are two main forms of joint ventures: contractual JVs and equity JVs.

Contractual JVs are formulated in countries where the national laws do not recognize the concept of privately owned property by foreigner. This is true of the command or planned economies of the COMECON countries. Contractual arrangements are made with regard to the supply of inputs by the foreign partner such as capital, equipment, industrial property, technical assistance and know-how. These are made available to the local partner (or government) in return for compensations which may depend on production, sales, profits, etc. Other forms of contractual joint ventures may involve liscensing, know-how and marketing knowledge transfers. It is important to note that contractual joint ventures are sometimes used as a preliminary arrangement prior to the formulation of an equity joint venture.

Equity joint ventures are much more frequent than contractual joint ventures. They involve participation of at least two partners in the equity capital of an existing company. More often, a new company is incorporated in which each partner owns a certain portion of the equity capital. It may well be easier to structure the operations of such a new company rather than to attempt modifying the structure of an existing one to the new methods of operation. Once an equity joint venture is adopted by joint venture partners, they must then decide on the appropriate legal framework for the enterprise, with regard to the host country's rules and regulations.

The two main types of JV, namely the contractual and equity sharing enterprises, can take several different forms in reality. These could generally be sub-divided into four categories, those which are:

1. Commercially oriented,
2. Inter-governmental (aid) orientated,
3. Raw material influenced,
4. Those motivated mainly in the interests of regional co-operation.

Commercially motivated JVs are fundamentally aimed at extracting the abundant raw materials available in DCs, harnassing low labour costs, and producing fertilizers for the domestic market, international market, or both. Such ventures are usually found between a foreign partner comprising of a medium or large sized firm from the North (for example, a transnational corporation (TNC)) and a local partner consisting of either a private firm or government agency. The host country generally establishes the extent of the equity share and the experience of the ASEAN region, for example, has seen foreign equity shares restricted to under 50% of the total capital requirements. The foreign partner may, however, exercise a stronger hold on management and marketing functions, thus providing the venture with a stronger position in an international perspective.

Aid oriented JVs more usually feature government to government participation. As the construction of fertilizer plants require high technology and capital inputs and are seen as assisting both the national agricultural productivity and industrial development facilities of DCs, they can form a significant feature of international aid programmes. This is especially so since they may provide some employment to private foreign construction and support firms at least at the early stages of such projects. Therefore in host nations with abundant materials and adequate facilities, aid orientated joint ventures are a feasible proposition.

Raw materials influenced enterprises are those JVs where raw materials are extracted from resource rich regions (without large markets) and exported for processing to locations nearer their inteded markets. Alternatively, the raw materials may be value-added through partial or complete processing near their original locations. Given that resources and markets for fertilizer do not co-exist all the time, and given that there is a need to search wider to locate new more economical sources, raw material influenced JVs can be found in many regions of the world.

Joint ventures formed as a result of regional co-operation can play a very significant role in the economic development of the developing regions. It is increasingly evident that ventures on a scale large enough to induce profitable economies of scale to be achieved are all too often too large for fulfilling single-country demand. Hence the desirability for building fertilizer plants to satisfy the aggregate demand of several regional partners is evident. The existence of regional unions such as ASEAN and ANCOM enable the aggregate market to be reached free of intra-regional customs qotas and levies, an in addition with the support of common transport, distribution marketing and research networks. The examples of this in the fertilizer industry include the Senegal Project and the ASEAN-Indonesia Project, both of which have distinct implications for regional and intra-regional co-operation in the economic development of those areas of the world.

Partners in a joint venture enterprise can vary considerably. Fundamentally, an international industrial joint venture as referred to in this paper must have at least one foreign partner and one local partner from the host country. The foreign partner is usually from an advanced nationa in the North, and could be a private firm (commonly a transnational corporation (TNC)), a foreign public sector body, or a foreign government itself. The same pattern can be applied to the local partner in the host country. Typically, joint venture agreements tend to involve the foreign private investor or foreign government and a local private or public sector participant or the government itself. The most common form of joint venture is one between a foreign private firm and a local private firm. As indicated above, there may well be more than two investors or partners within the framework of the joint venture enterprise.

Joint ventures in any form between developing country governments are much fewer in number, although they do hold much potential for the future. Given that many developing countries have to contend with similar types of social and economic problems, a joint attempt to establish fertilizer production facilities to fulfill a wide market need seems a logical one.

Aside from the above mentioned combination of partners, there also exists the North-North ventures where tow foreign firms operating in a third host country (usually a developing country) may establish joint ventures for purely commerical motives. As this paper is concerned with the role of joint ventures with respect to improving the economic situation of the developing countries, this form of joint venture is not pursued here.

II. Recent Experiences In International Co-operation in The Fertilizer Industry

This chapter outlines:

1. Distribution of feedstocks necessary for the fertilizer industry;
2. A general picture of the latest global fertilizer production and consumption trends;
3. A review of the recent international cooperation schemes in the fertilizer industry through the joint venture process.

The overview of production and consumption patterns here should make apparent the need for, and the potential to be realized in, the expansion of fertilizer production capabilities in the developing countries through the establishment of more joint ventures agreements.

Raw Material Distribution

FAO statistics reveal that the development of the fertilizer industry will not be hindered by the shortages of feedstocks in this century.

Fundamentally, there are three categories of raw materials needed for the production of fertilizers. These are :

1. Natural gas, coal, and crude petroleum for the production of ammonium and nitrogenous fertilizers;
2. Phosphate rock and sulphur for phosphatic fertilizers;
3. Potash and brine for potassic fertilizers.

Natural gas, the preferred feedstock for ammonium and nitrogenous fertilizers, is plentiful in the Middle East, Africa and Asia. Yet in terms of production, on average the manufacture of fertilizer uses the following proportions of the world production of raw materials : 85% phosphate rock, 40% sulphur, and 95% potash, as compared to only 3% natural gas and 0.05% oil products and coal. With large reserves of gas and oil at hand, there is no cause for immediate concern regarding feedstock supplies to the fertilizer industry. Ammonia feedstocks can be found in many developing and developed countries, although the former are in a much stronger position with regard to the ratio of reserves against production levels, than the latter. Coal reserves are also ample for the future world consumption needs. However, whilst in general hydrocarbon feedstocks are adequate, they will be increasingly costly in the foreseeable future. This necessitates the use of more energy efficient technology in developing countries, which could be obtained through joint venture agreements.

Phosphate rock, beside coal, is one of the most variable inputs in terms of quality to the fertilizer industry. It is widely and yet unevenly distributed globally. The USA, USSR and Brazil accounted for 52% of 1986/7 production levels, with about 70% of the sources being located in Morocco itself. World phosphatic deliveries declined by 4.2% to 148.6 million tons in

1985, reflecting the decrease in the world consumption of phosphatic fertilizers. Whilst the rate and extent of new phosphate rock discoveries far exceed current consumption, the present trend of low grades rock will mean that both consumers and producers alike will need to display more selectiveness in the evaluation, specification, grading and selection of this feedstock.

The largest share of world sulphur consumption is directed at the production of phosphatic fertilizers. The total global sulphur production reached 35.8 million tons in 1985, whilst consumption, having shown an increasing trend in the previous two years, declined in 1985 by 500,000 tons to 37.2 million tons. The resulting deficit was largely fulfilled by using Canadian stocks which are the largest at present. Overall, the fertilizer industry should be able to obtain all its sulphur requirements in the next 25 years. This should build up to a significant increase by 1988 as USSR and USA increases push production to about 38.4 million tons. The general view is that for the next few years consumption will outstrip production (with reserves being drawn upon) but by 1990 the USSR, through major new production facilities, will contribute about 3.5 million tons to world supplies, thereby helping to strengthen the outlook for sulphur.

Potash reserves are very large at around 132 billion tons and accordingly adequate for many centuries to come. USSR and Canada together contain about 80% of resources, the remainder being located in USA, Europe, the Middle East, Thailand, Congo and South America.

Production Patterns

From the viewpoint of combined global production of these three primary nutrients, the latest data indicate that in the 1984/85 fertilizer year (July 1st to June 30), production reached 140 million tons (Appendix 1, Table 1a). This was an increase of 11 million tons over the previous year; 4 million (37%) of which could be attributed to the developing market economies, 3 million (27%) to developing market economies, and 2 million (18%) to centrally planned economies.

It is very significant to note that it is the developing country economies which registered the highest production growth rates for each nutrient in 1984/85 (Appendix 1, Table 3 for average growth rate summary). This should promote the further establishment of joint venture projects in these regions of the world.

This section will examine the production patterns for nitrogen, phosphates, and potash in turn in the following regions :

1. Developing market economies;
2. Developed market economies;
3. Centrally planned economies.

In nitrogen production worldwide, the main contributors in 1984/5 by far were the developed countries, followed by the developing countries and the centrally planned economies.

Within the developing market economies, a substantial growth in nitrogen production was evident, with the Near East and Latin America both displaying growth rates pver 20%. The Far East, dominated by India and Indonesia, provided 13% or the largest addition to production (878,000 tons)

In the devloped economies, USA showed production growth rates in nitrogen of 18% (1.7 million tons), West Europe 6% (680,000 tons), and Oceania 22% (48,000 tons) (Appendix 1, Table 3a).

In the centrally planned economies, only China contributed heavily to increases in growth rates by producing over 1 million tons of nitrogen. USSR, Romainia, Czechoslovakia and Poland registered smaller increases, whilst Hungary and the German Democratic Republic (GDR) showed a decline in production.

In phosphate production globally, a similar pattern to nitrogen production was noticed, although there was a small decrease in production by the centrally planned economies.

Amongst the developing nations, Latin America registered a 30% increase in phosphate production, mainly due to Brazilian efforts, whilst both the Far East (mainly India) and Near East (especially Jordan) displayed significant rises. Africa, however, illustrated a decline in production, caused mostly by the fall in Moroccan output.

In the developed world, phosphate production was marked by a 6% increase, owing to American efforts. Production in West Europe increased marginally but that of Oceania decreased..

Amongst the devloping countries, Jordan had a major contribution to potash production through Dead Sea sources. It accounted for over 70% (120,000 tons) of the increase in potash production amongst the developing country economies.

The small increase in USSR's potash production over the previous year was the only significant sign of activity in this nutrient sector, with GDR and China displaying only marginal increases.

Consumption Patterns

The total global consumption of the three primary nutrients reached 130.7 million tons in the 1984/85 fertilizer year (Appendix 1, Table 2a). This represented an increase of 4.2 % over the previous year's level of 125.2 million tons, but this was less than half the growth rate of the previous year.

The largest percentage increase in consumption was in the developing economies which were, in addition, the only economies to feature increased consumption in each of the three nutrients. The average increase for all nutrients in the developed economies was just under 1%, owing to the small increase in consumption of nitrogen and the decline in phosphate and potash comsumption.

Consumption patterns within the developing world could be sub-divided into the following regions :

1. Africa,
2. Latin America,
3. Near East,
4. Far East.

In Africa, the overall consumption of fertilizer declined in the 1984/5 model year, largely due to national financial problems (Appendix 1, Table 3). There was a small increase in nitrogen consumption, and general declines in phosphate and potash consumption. The growth prospects for 1985/6 will be largely influenced by the level of fertilizer aid received, as since 1983/4, 28 out of 44 African nations received some form of fertilizer aid (especially those in the Central African and Sahel regions). This fact supports the need for more joint venture cooperation in the developing regions in order to alleviate external dependence and create the fertilizer production capacities which are urgently needed.

In the Latin American region, a strong recovery in the consumption of all nutrients could be seen in the 1984/5 year from the significant decline experienced a year before (Appendix 1, Table 3). Of this, Brazilian consumption constituted 45%, and Mexico 25%. Cuba, Colombia and Chile all registered increases in all nutrients. Improved weather conditions and better prices for agricultural products helped foster this favourable situation. This growth is anticipated to continue into 1985/6.

The Near East registered a decline in general consumption, with an absolute decline in use of nitrogen and potash and a small rise in phosphates. Turkey accounted for 34% of total consumption, Iran 24%, and Egypt 20%; the largest decrease in consumption was by Egypt, followed by Turkey and Iran. Saudi Arabia provided a rise in the general consumption. Unfavourable crop price relationships, reductions in subsidies and poor weather contributed to the overall consumption patterns. Growth rates for 1985/6 are expected to be modest.

The Far East featured growth rates for all nutrients which were higher than the latest 5-year averages for the second consequetive year. India contributed significantly, and consumption levels in both Indonesia and Pakistan increased (-in the previous year they had declined). Philipines, however, registered a marked fall. The end of the Indonesian drought, and better crop-fertilizer price relationships in Pakistan helped the upturn, with the Philippines involved in major internal reforms. A strong growth in consumption levels is predicted for the next model year and this is largely attributed to positive government policies and sustained efforts to increase the application of fertilizers.

In the centrally planned economic regions, the emphasis in growth centered on Asia with no significant increases in Eastern Europe and Russia. A marginal increase in total consumption of phosphates was evident in Eastern Europe and the USSR, but that of potash and nitrogen decreased. In Asia potash consumption declined a little, and small increases in nitrogen and phosphates relative to the previous year could be seen. Growth prospects in Eastern Europe and the USSR for 1985/6 seem likely to be mostly determined by weather and the effciency of the transport system.

III. Setting-up Fertilizer Joint Ventures in Developing Countries

From an overall perspective, it is evident that the developing regions of the world are necessary partners in the future of the fertilizer industry worldwide. The developing countries have a large portion of the required feedstocks, as indeed a very significant share of the present and anticipated demand for fertilizers. Their growth rates in production and consumption as indicated by the diagrams in Appendix 1, Table 3, suggest that joint ventures in these regions will have a firm place in satisfying national demand and supporting industrial progress. With an ever increasing food deficit, the need to reinforce and expand the production capacities in the developing countries is vital.

Moreover, the traditional means of expansion mostly through the establishment of TNC subsidieries or other foreign enterprises operating purely in foreign interests is no longer practical in the socio-economic and political context of today's world. Future expansion must contribute economically to the host and the host region. Such an expansion, from the host's viewpoint, must also be made within the confines of manageable capital and operational costs, as well as adequate returns (whether viewed from a private or national viewpoint) in mind. It is clear that the establishment of fertilizer plants is sensitive to economies of scale. Gains through this means can only be brought about through the incorporation of more modern, efficient technology and better management services. It is, therefore, at this stage that the feasibility of joint ventures becomes apparent.

Joint venture agreements in the fertilizer industry are yet small in number. Nevertheless, they are still very distinctive. Amongst the examples of successful joint ventures projects, highlighting the recent co-operation efforts in the fertilizer industry, are the undertakings outlined in Appendix

In the post-war period, amidst much controversy regarding the role of foreign enterprises such as Transnational Corporations (TNCs) in the developing world, the clear tendency set by the TNCs has been to invest directly in the developing countries almost exclusively through their wholly owned subsidiaries. Such subsidiaries have normally been answerable only to the parent company abroad, and local interests were inevitably made subordinate to the foreign firm's business objectives. Local participation in most cases has been minimal, or in situations where it has been more extensive, the controlling power has resided with the foreign company. Moreover, such subsidiaries have been in a position to use links with their diplomatic missions in the host country to overcome possible issues or confrontations raised by the host government. However, with the changing international situation and in particular the progressive ambitions of host governments, foreign investors have come to realize the political, social and economic constraints imposed on subsidiaries as an instrument of their overall global business strategies and the need to partake in a more harmonious relationship with developing country governments. Yet until fairly recently, and quoting a range of problems including that joint ventures are troublesome, less easy to control, unstable and riskier, most Western TNCs have tended to avoid joint ventures unless they have had no other forms of investment in a developing country.

The remainder of this chapter addressed two main themes. Firstly, an analysis shall be made of the local partner's (and host government's) views regarding the enterprise. Secondly, the attitudes of the foreign partner (usually a TNC or medium sized corporation) to the joint venture process will be examined. The two viewpoint together, it is hoped, will present the general case for joint venture agreements which could then be presented within the context of the world fertilizer industry.

1. The Joint Venture As Seen By the Local Partner (Host)

This section will consider, first, the progression of the stance adopted by many developing countries with respect to foreign investment. It will then examine the views of the local partner with respect to joint venture proposals.

In most developing countries, the decision to embark on a joint venture is not made solely at a private company level. Approval of the scheme, regardless of the type of local partner, will often be made directly or indirectly by the host government. Following the emergence from the colonial period, the national constitutions of many developing countries, India being a prime example, sought often in a socialist style to protect local interests and resources from unrestricted foreign exploitation.

In the Indian case, it is argued by many that any foreign attempt to invest in India was effectively a decision to invest through a joint venture agreement. The Indian Policy Resolution published in 1948 stated :

> "...the major interest in ownership and effective control should always be in Indian hands." (6 April 1948)

The Industrial Policy Statement issued by the Government of Pakistan also in 1948 declared that foreign investment would be permitted providing that :

> "...it claimed no privileges and that opportunities for indigenous capital are provided and monopolies avoided."

This meant that Pakistani citizens should have an opportunity to subscribe to at least 30% of equity in all companies and at least 50% in those on a special governmental list of industries. Both countries have since these early times toned down on these restrictive declarations : majority holdings by Indian nationals in joint ventures enterprises have been welcomed and not made compulsory. Similar freedoms in equity participation in Pakistan have been outlined in the 1958 Industrial Policy Statement. Generally, over time, there has clearly been a relaxation in terms of entry for foreign investors. This has been reflected in changing governmental policies regarding composition and control, as well as in the practical interpretation of such policies on a "merits of the individual case" basis.

The stance adopted by countries such as India and Pakistan since independence has been well documented. The trends which have subsequently emerged in the investment environment here have shown similarities with the plight of many other developing countries. As such, four main stages, categorized by Tomlinson (1970) as Unilateral Antagonism, Mutual Suspicion, Joint Acceptance, and Sophisticated Integration, have emerged. These stages throw an important light on both the need for future joint ventures in areas such as the fertilizer industry of the developing regions, and also on the perceptions of these agreements from a local viewpoint.

The first stage, deemed as Unilateral Antagonism, occurs when a newly independent nation displays fears of economic domination. It may fear the unseen presence of a colonial power through neocolonial ties, or even a now-displaced local elite. This results in a host government fostering a different distribution of benefits and responsibilities, often along egalitarian or more socialist lines. Foreign direct private investment becomes suspect during this phase for two reasons. Firstly, as it is private at a period when a host may be experimenting with a socialist model, or, owing to the desire to centralize social and economic control to harness national resources for development. And secondly, as it is foreign investment and as such supported by powerful foreign governments - a threat to national sovereignty.

The second stage - termed Mutual Suspicion - sees the host nation embroiled in the major problems concerning economic development. Inevitably, foreign exchange problems begin to appear owing to characteristically high rates of imports. Foreign capital investment and technological assistance become vital in supplementing national resources and fuelling national development strategies. Alternatively, foreign owned extractive enclaves may help in providing the host with some of these requirements, but these sources can not avail the host of all the required range of resources. As a result, the new nation gradually encourages the entry of foreign technology and capital, but a rigid control is still maintained. This, however, usually leads to mutual suspicion between the host government and foreign investor as they become wary of each other's motives and interests.

Stage three is the phase at which large developing economies such as those of India and Pakistan have reached at present. With foreign investments making a widening presence in the host economy, much is still in the making. If foreign investment is introduced and the net social benefit is greater than the net social cost bourn by the host, then the joint venture is placed in a stronger position. Hence the description of this stage as one of Joint Acceptance. The stability afforded by the host and the reactions attributed by the government (see Chapter 6) are critical in conditioning the response of the foreign investors. Whilst appropriate measures of encouragement are beingmade by many developing country governments, in many cases the required political stability and assurance of non-restrictive government policies for the future operation of the joint venture are not as secure as might otherwise been expected.

The fourth stage would be a continuation of stage three when a relatively harmonious relationship between the foreign investor and the host bears fruit and leads to the continuing confidence in the investment environment. This would provide a strong impetus to economic growth and further relaxation of entry of foreign investment are likely to be tolerated. Tomlinson believes that at this stage local interests and participation will be promoted more through discretionary fiscal and financial incentives rather than through the more damaging legislative prohibitions. As a result, this stage has become known as the stage of Sophisticated Integration.

The above outline of the four general stages of national progression places the joint venture agreement in an almost unique position in national development plans. It is an attempt to promote at least two groups of interests with a clear financial and social return in mind, but balanced by humanitarian motives. It is the overall contribution of the enterprise which is the most important element in this joint effort, not the return to any one

individual partner. These four stages display the urgent input requirements of developing regions and also play a crucial role (see Section 2) in answering the question of why foreign partners choose this particular form of investment in developing countries.

As this section is primarily concerned with the attitude fostered by the local partner to the joint venture, it is vital to consider the individual reasons for undertaking this form of investment. These are now considered in approximately the descending order of importance. Surveys conducted by UNIDO on joint ventures in the ASEAN petrochemical industry, together with numerous academic surveys, have contributed to this ordering. The reasons include :

a. Acquisition of newer foreign technology and know-how;

b. The access to raw materials from abroad at concessional rates;

c. Acquiring new means of distribution abroad and penetrating foreign markets;

d. The need to develop national industrial bases, diversification of product lines;

e. New capital infusion.

It is evident from the abovementioned stages that the developing country government, over time, become increasingly anxious to offer incentives to draw foreign direct investment into the developing economy. These incentives are aimed at stimulating both the public and private sectors.

The ensuing transfer of technology is clearly one of the most dominant reasons cited by local partners for embarking in joint ventures, especially when the local partner is a government agency or public enterprise. With research and development costs being prohibitively high, and as, in view of demographic and other constraints, the host is often unable to allocate much time for developing and refining necessary technologies, developing country governments are understandably enthusiastic in harnessing every available means to establish the industrial base needed for their economic development efforts. The actual technological transfer can now take several forms. These include : licensing of older, established technologies and knowledge to the developing country partner; selling franchises to local commercial partners; or direct selling of technical equipment and service support, perhaps individually. In the fertilizer joint ventures, this transfer of technology is vital if economically efficient, large scale plants are to be constructed to meet local and regional demand. The technology needed for this form of industrial enterprise need not be highly sophisticated ; yet newer methods of fuel efficient processing are necessary in the developing regions in order that the current (and in many cases aging) technology found in developing countries can be updated to meet the highly competitive conditions found inthe world markets. These newer methods, once successfully incorporated to suit the local environment and its problems, can then form the basis for South-South joint ventures. This would enhance regional self-sufficiency.

The access to alternative raw material sources is a second reason stated by the local partner (as indeed the foreign partner) for entering into a joint venture agreement. This is evidenced in a recent fertilizer joint venture between the Governments of India and Nauru (Pacific) whereby the latter was responsible for the supply of phosphate rock to India at very favourable prices specific to this undertaking. It is clear that factor prices and endowments are an essential reason behind the decisions to embark on joint ventures and these factors could refer to items such as physical materials, labour supply (skilled and unskilled), and management skills. Local partners are concerned with the assurance of a sustained growth of exports in the face of trade restrictions, competition, barriers to entry abroad, and demand saturation in certain markets and therefore require access to their local resources together with efficient and economical inputs of foreign resources.

Local partners, particularly private firms, often favour this means of business reconciliation as a path to acquiring new means of distribution abroad. Penetration of individual foreign country or international markets is a very difficult and a potentially dangerous business commitment for many a developing country firm with limited resources and contacts at its disposal. A joint venture, however, provides a opportunity which can strength such a commitment both from the viewpoint of the joint venture itself and even after participation in the venture from either partner is no longer necessary. This ability to access foreign markets and in addition obtain the support in marketing and distribution sectors afforded by the foreign partner is invaluable to the local partner and host. From a host government perspective, regardless of whether the local partner is from the private or public sectors, it can be seen as strengthening overseas links and stimulating economic activity at home, as long as the social cost to the host is in proportion to the returns.

Another reason favouring joint ventures from the local partner's viewpoint centers on the need to establish or develop a national manufacturing base. Host governments may seek to implement regional economic policy by setting up a state agency or trading company (such as the National Fertilizer Corporation of Pakistan) specifically for the purpose of starting joint venture agreements with foreign partners. The local partner may then aim for the penetration of a specific regional market, new or existing, and harnessing the combined inputs afforded by all partners in order to meet the investment operations of market competitors. Alternatively, if the local partner was a private sector firm, the venture may provide an opportunity for diversification of the product line, as indeed a geographical diversification of company operations, and ultimately gain a larger market share. This may bring future market security for the local partner.

The use of joint venture enterprises as a means to prompt an infusion of foreign capital is not as strong a motivation for the local partner as might have been expected a decade ago. Whilst this input is clearly very valuable in that the financial burdens are shared, host governments have been at pains to restrict outright foreign financial and thus executive control of the venture. National legislation in many developing countries has restricted the equity share held by the foreign partner and has suggested that management and executive control of the enterprise should reflect the general equity share by the partners. The introduction of public shareholding and funding of joint ventures has been another act of caution by host governments. The foreign partner, in many cases, has shown a reluctance to invest heavily owing to concerns over long term market viability and apprehensions about future

political stability. Instead they have seen a necessity to generate local confidence by committing some equity at the early stages of the venture but making provisions for a gradual withdrawal. This strategy is in harmony with local interests. For local partners, decreasing equity joint ventures can satisfy the requirements for actively increasing their level of control as their experience and expertise develops over time.

This section has proposed five main reasons why joint venture agreements may be deemed as favourable from the angle of a local partner in a developing country. It is now in order to examine the viewpoint of the foreign partner to this venture.

2. The Joint Venture As Seen By the Foreign Partner

To be persuaded that joint venture agreements offer a more balanced outlook to investment prospects in the developing regions may not be, at first, an easy proposition for a commercial TNC to grasp. It is evident from the past that directly controlled subsidiaries, acting predominantly for foreign interests, have been very profitable in exploiting the resources necessary for the livelihoods of TNCs abroad. In the changing international stage of the last two decades, political, social and economic factors in the developing regions have generally changed, making the position of TNCs more sensitive. An appropriate change to their global business strategy has been necessitated.

This section will examine :

The rationale in embarking on these agreements by foreign partners as such:

a. The appeal in the clarity and structure of joint ventures;

b. The joint venture as a means of market entry and better market control;

c. Risk minimization overseas;

d. Access to raw materials and factors of production;

e. Sale of technology;

f. Access to special national investment incentives.

The decision to participate in a joint venture agreement with a local partner in a developing country will not stem purely from commercial motives of the potential foreign partner. This has been evident through a survey done by Tomlinson (MIT, 1980) of British firms choosing the joint venture form of investment in India and Pakistan. This survey indicated several common reasons underlying the emergence of joint venture proposals in this region. The two reasons most critical to the position of the foreign partners were explicit and implicit pressures imposed on the foreign firms by the host government regardless of the status of the local partner.

As a result of these pressures, it is evident that the position of the foreign investors in developing countries is not as secure as it once was in the past. Foreign corporations are no longer as able to dictate the terms of entry and operation, and are increasingly forced to acknowledge the interests of host governments. Therefore, the corporations may logically be expected to seek out the most advantageous position which is available within the opportunities and boundaries for investment made available by the host government. Joint venture agreements thus seem an appropriate vehicle for this purpose.

Aside from the two reasons mentioned above, there are a host of reasons which argue for the creation of more joint ventures in different sectors, especially the fertilizer industry. Several of those outline in Section 1 governing the local partners attitudes towards joint ventures also apply to the foreign partner. Some of the more important of the general reasons are highlighted below.

The structural framework of the joint venture enterprise itself could be an appealing factor to a foreign corporation exploring ways of investing abroad. By virtue of the need to reach a consensus between the foreign and local partners on the ultimate aims and the steps needed to achieve these, the joint venture enterprise assumes a clearly defined corporate structure. The enterprise thus does not have wasteful tradition-bound practices or other unnecessary additions and is fundamentally lean. As such, it is, at least from an administrative viewpoint, in a more able position to achieve satisfactory returns on investment. Moreover, the enterprise evolves as a flexible body and thus is appealing to foreign partners who would otherwise be suspicious of local bureaucratic mechanisms interfering with corporate efficiency.

The foreign partner could view the joint venture as a means of circumventing the nationalist actions against foreign investment which have been witnessed in many newly independent developing countries. The desire to enter and learn the needs of new domestic markets, or improve the effectiveness of existing marketing efforts in a specific region often prompts their involvement in such agreements. There could also be a desire for vertical integration of existing products and the avoidance of cyclical or seasonal instabilities with regard to the nature of the foreign partner's business abroad. In addition, the foreign firm may wish to utilise the better established transport and distribution networks of a local company, with longer term local interests in mind, thus adding strength to its marketing functions. Such local interests could involve a gradual strategy of matching other competitors' investment operations in a given developing economy and strengthening the firm's market outlook.

The policy of risk diversification, adopted by most international corporations today, may encourage more interest in joint venture proposals. A TNC may wish to spread its international operations and corporate capital over a wider range of interests worldwide so as to minimize risk. There are normal business risks to be considered, as well as the special risks posed by political and economic uncertainty when attempting to operate alone in a foreign environment. In particular, foreign firms, including some already involved in joint venture operations, tend to fear restrictive policies adopted by host government after their investment efforts have materialized.

The need for raw materials and local facilities have also influenced foreign corporate interests in the developing regions. The attractions of lower transport, labour and raw materials costs in developing regions feature strongly in decisions by the foreign partner to take part in joint venture agreements.The support of local firms which are more familiar with local conditions and procedures, together with local assistance in acquiring factors of production such as skilled and unskilled labour, marketing facilities, and help with legal and political matters also play an important role. As a result, the opportunity to join an feasible project initiated by local interests has proved an attractive option for a foreign corporation intent on diversifying its own business interests. This would also prove some form of local identity for the firm which would further enhance the image of the foreign firm in developing countries.

The opportunity to sell older technologies and technical services, together with capitalizing on specialized corporate assets (such as patents, franchises, brand names) may act as an incentive to form joint venture agreements with local partners. Many companies have shown a willingness to cooperate in this field, rather than commit larger capital inputs to joint ventures.

The access to special incentives offered by the host government as apart of the joint venture proposals, especially tax, quota and import privileges, has proved to be a strong incentive to foreign participation in local joint ventures. In addition, the foreign partner might then be able to compete and gain market experience from behind protective tax barriers present in the economy.

This section has highlighted several main reasons why the industrial joint venture proposal in general may be seen by the foreign firm as a favourable means of cooperation. It is evident from both the local and foreign partners' viewpoints that a definite area of mutual cooperation and benefits do exist (as the examples in Appendix 2 have illustrated), and it remains for the most suitably qualified and best placed partners to formulate the basic corporate framework within the national rules, regulations, and governmental approvals of the operating environment. This paves the way, in Chapter 4 Part B, to examine the basic differences between the various forms of joint ventures.

Relative Merits Of Different Forms Of Joint Ventures

1. The Importance Of Public Enterprise As A Local Partner

Public enterprise as a local partner in a joint venture agreement can assume several forms. It may refer to a government trading agency, a nationalised body, or a state corporation. Cooperation between a foreign partner and a public body is, as yet, an uncommon form of partnership. Yet the potential for this form of joint participation within developing regions in the establishment of fertilizer plants may be underestimated, especially since such a partnership may offer a contribution which is more to the national benefit than a purely private joint venture.

There are several conditions necessary for the involvement of public enterprises in industrial joint ventures. Firstly, there must be public enterprises in production and trade in a given field. Secondly, public enterprises must have the required economic power to establish such joint ventures. Thirdly, they must have the necessary managerial staff and abilities to operate within the agreement.

Whilst the advantages offered by international industrial joint ventures were qualitatively relatively balanced in general between the private and the public sectors, it is clear that some of these advantages may be especially realized through public enterprise joint ventures. The benefits to be gained by foreign firms through joint ventures with public enterprises include those deriving from :

a. The long term commitments of public enterprises;

b. Preferential access to resources;

c. Protective legislation for public joint ventures;

d. Large scale joint ventures.

Public sector enterprises generally have a longer term view of the national economy and in their operation take into account national goal and priorities, thus giving more stability to the foreign partner in the joint venture agreement. In fields where longer term involvement is necessary (e.g joint exploration and extration of raw materials for the fertilizer processing, the establishment and utilization of infrastructure, or joint production, sales, and servicing organizations), the contribution of public enterprises is of value to the foreign partner in the joint venture. This stability would help lessen the risk elements with which foreign partners are often concerned in entering such ventures.

The foreign partner may also acquire preferential access to local capital, skilled manpower, and resources when involved in a public sector joint venture. This is of particular importance to the industrial venture. Benefits in the form of assistance in complying with local regulations (and exceptions to general rules) and in the granting of special licences and permits may be accrued through involvment in this form of joint venture.

In some nations, there is national legislation providing some degree of protection and compensation for foreign investments which are entwined in public enterprise joint venture agreements.

In addition to this reduction in political risks, public sector enterprises could create larger and more efficient production base for a given region, or a solid export base for world markets, thereby satisfying the economic viability criteria which is often demanded by the foreign partner. This would also benefit the host economy since the most highly valued of the foreign contributions, aside from technology transfer to the host, is the greater access afforded to foreign markets.

From a national perspective, public sector joint ventures enable better control over some international operations of foreign firms, such as reverse capital flows, transfer pricing, and profit repatriation. In addition, better bargaining power vis-a-vis foreign investors, the potential or tighter capital and resource control, and a larger share of exported and processed materials could be achieved. Moreover, such partnerships could contribute more to the spread of imported technology than through private sector enterprises. When linked to the advantages offered through national science, technology and research facilities, coupled with access to national marketing and transport networks, public sector joint ventures could be a potent form of cooperation.

The very involvement by public enterprises can also be construed as a further obstacle to a potential foreign investor.With regard to the advantage of enhancing political cooperation and guaranteeing commercial freedoms, rapid changes in government may reverse the privileges granted by a former administration to such an enterprise. The national interests within which such public bodies (often non-profit making and generalized) operate can also conflict with the more economically motivated aims and strategy of the foreign partner. The potential delays in government decision making, especially in the early stages, can incur irrecoverable losses in an enterprise as finely balanced as a joint venture. Moreover, in cases where the local partner is a large state, the tension which can arise as to who is effectively in control can pose significant strain on a joint venture relationship. It may well be better in opportunities where public sector joint ventures are warranted, for such ventures to concentrate less on equity partnership and more on contractual relationships for technology, know-how and marketing strategies.

Having examined the benefits offered by a public enterprise as a local partner, the next section will contrast the adavantages posed through the most common form of partnership : private sector participation.

2. The Characteristics Of Private Sector Participation

The advantages to be gained through private sector joint ventures include:

a. Greater flexibility and speed in operation;

b. Greater efficiency;

c. Less internal political restrictions;

d. Greater interaction between partners.

Assuming that the compatibility of partners is not in question, joint ventures involving private firms seem to be managed along more economically justified strategies, at least initially, and are less susceptible to be drawn out by political factors due to social and national interests. Thus, the internal political restrictions are reduced and the enterprise is given greater freedom in its day-to-day operations. This freedom may be coupled with a greater opportunity to exchange ideas and views between partners, in contrast with public sector joint ventures where the authority of the public enterprise, reinforced by the say of the government, may disturb the long term relationship with the foreign partner. An agreement where two or more private partners can negotiate around a potential issue, guided by their mutual business objectives - the profitability of the joint venture - may prove to be a more efficient example of industrial cooperation as opposed to government-foreign partner confrontation.

Perhaps the single biggest argument in favour of private sector participation, as against the presence of a public sector body as the local partner in the industrial joint venture, is that of economic efficiency. Public organizations, owing to their very nature, behaviour and operational constraints, may not in general be as efficient in the utilization of resources or bring as high a rate of return as private sector joint venture agreements. It is principally for this reason that many foreign corporations with interests in the developing country economies have chosen to embark on industrial joint ventures with local private corporations.

Yet, one of the most crucial factors affecting the private sector joint venture agreements can not be avoided. Despite the lessening of internal political friction through cooperation with local private firms, the host government still commands, directly and indirectly, dominant control over the operation and indeed the success of the joint venture. Irrespective of the individual joint venture's performance, government policies condition its survival in the long term. For this reason, the significance of the government's role will be analysed later in Chapter 6.

3. Government-To-Government Cooperation

This form of joint venture is much less common than private or public sector ventures. It is motivated primarily for reasons of aid and political goodwill, or regional cooperation. Joint ventures involving government-to-government participation illustrate a form of South-South cooperation.

With regard to the fertilizer industry, this form of joint venture agreement can play an important role in the developing regions of the world. The construction of fertilizer plants and the associated infrastructural facilities is a technically complex, capital intensive and time consuming task for a single nation. Moreover, the plant would in all probability require resource inputs from abroad in the long run. Given these constraints, it seems feasible to promote intra government negotiations for joint ventures in order to alleviate the burden on a single government and establish production capabilities in a suitable location. The doner would not be acting purely for altruistic motives. Although it may offer capital and technical assistance to another government for purposes of establishing a joint venture, the doner would benefit, for example, through the sale of its own raw materials, technology, and support services to the venture, or through the purchase of favourably priced fertilizers produced through the joint venture, or concessions of one form or another. A recent case in point concerns a joint venture project partnered by the governments of Nauru and India.

The government of Nauru wished to reinvest revenues accruing from its exports of rock phosphate in profitable foreign joint venture schemes. Moreover, Nauru was intent on diversifying its investments geographically, and consequently was searching for appropriate investment possibilities. India, meanwhile, with a high fertilizer consumption level and low indigenous production of rock phosphate, was in a position to make use of Nauru's raw material and capital inputs to improve its own production capacities for phosphatic fertilizers. In the spirit of goodwill, and with an interesting and feasible opportunity at hand, the two governments embarked on an industrial joint venture based in India. A company (Paradeep Phosphates Limited) was established with 40% equity being provided by Nauru. India, thus,

was able to acquire the principal raw materials at competitive conditions, whilst Nauru similarly benefitted from employment, export revenues (with all Indian dividends repatriated to Naurur in hard currency), stronger diplomatic linkages, and very valuable experience in joint venture enterprises. As a further example of South-South cooperation, Nauru was able to build on the experience gained through the Indian venture in negotiating on a similar level for a joint venture enterprise with the Philippine Phosphate Fertilizer Corporation (PHILPHOS).

This example highlights the case where government-to-government cooperation met with success in the form of an industrial joint venture in the fertilizer industry. It demonstrates in particular that such proposals have optimistic prospects especially between nations unfettered by historical disputes and political suspicion. This understanding forms a crucial base to the reconciliation of potential differences which inevitably arise in any joint venture enterprise. In such a situation, healthy commercial interests are a mutual advantage to both partners.

4. South-South Cooperation

The examination of the role of government-to-government cooperation in joint venture proposals made in the previous section is one aspect of the need to promote South-South cooperation. There is a need to promote intra-South joint ventures especially as vehicles of technology transfer and in marketing with both private and public sector participation.

Several reasons are forwarded for using this form of enterprise as a first step in stimulating regional cooperation. Recent time series analyses by S.Lall (1982) indicate that intra-South trading relationships have shown little positive change since the mid-1960's.

One of the major advantages of joint venture proposals in the developing regions concern the similarities present in social, economic, and political environments within developing nations of the South. There are many common structural and political issues across developing economies which lend developing country partners with common awareness in the approach to the establishment and in particular the implementation of joint ventures. As a result, there is a welcome degree of parity, for example, in the human and personnel approaches of partners from witnin developing regions. Similarly, there exists a higher level of mutual appreciation of different cultures and industrial bases amongst such partners.

The need to stimulate economic activity and do so with national development interests and policies in mind provides the joint venture enterprise with an advantage over purely commercially orientated organizations. National governments, in collaboration, can exert a major influence in the operation of private and public sector joint venture agreements and in the provision of the necessary intermediate technology, infrastructure and skilled labour required by the enterprise. These ventures could benefit greatly from regional customs and tariff unions, common transport networks, assistance from government trading agencies, as well as common regional research and development facilities. This may well eliminate wasteful duplication of facilities and instead lead to a synergistic outcome whereby the sum of all individual efforts will be greater than the simple

aggregation of the individual contributions. Joint venture agreements, irrespective of the form, could also be designed to operate within regional law as opposed to national rules and regulations, and hence make use of profitable clauses and exemptions.

On the important issue of technology transfer, joint venture agreements would enable a regional spread of appropriate technology through relatively easy and harmonious means. Heavy dependence on the technological input and managerial support provided by the North is clearly not advisable in the long run and the need to refine and develop technical methods and knowledge suitable for developing country environments is ever present. Yet, given the widespread disparities in endowment amongst the South, it is evident that in such a individualized situation, certain developing economies are able to undertake a moderate technical research and development effort which then leads to further polarisation. This calls, therefore, for a means of technology diffusion, and joint venture agreements may well provide such an opportunity. Sanjay Lall (1982), however, argues that it is inadvisable to concentrate on intra-South technological development as a means of reaching a high level of technologiacl self-reliance. He forwards the notion that South-South technology promotion will, inevitably require further inputs of technology and capital from the North. Nevertheless, the potential for regional cooperation in this field is very evident.

It is useful to exercise a further word of caution with regard to the use of joint ventures for intra-South cooperation. In a regional context, public sector joint ventures are more prone to difficulties in several respects than private sector ventures. The enterprise may find itself exposed to the compounding of public enterprise problems of the participating nations. It may meet difficulties in entering foreign markets owing to the low market efficiencies characterised by public enterprises. However, this weakness could be overcome through the hiring of foreign trainers for a set period. Besides the possible low levels of efficiency, there is also the element of imprecise socio-economic objectives associated with public enterprise participants. Consequently, the more ambiguous the focus of the joint venture operation, the greater the need to shield it from as many non-financial objectives of the public sector partner as is possible, and in addition the need to formulate precisely future objectives in the joint venture agreement.

IV. Obstacles And Areas of Potential Conflict

Although recent data concerning the status and performance of fertilizer joint venture agreements is scarce, information gathered on the petrochemical industry throws a valuable light on the vulnerability of ill planned joint venture agreements to failure. S.Lall (1985) states that by August 1980, of 399 joint venture projects approved by the Government of India for overseas operation, 161 (40%) were abandoned prior to commencement, 34 (9%) were abandoned after commencing operation, and of the 204 (51%) projects remaining, 117 (29%) were in production by August 30th 1980 whilst 87 (22%) were in various stages of implementation. J.Walmsley (1982) states that in the case of Saudi Arabia, about 70% of potential ventures were aborted owing to problems encountered in the early phases of formulation.

These figures highlight the dangers in the potential problems which may arise, leading to an aborting of the joint venture process. A recent UNIDO survey (on the ASEAN petrochemical industry) identified some main problem areas within joint venture projects and classified these into internal and external problems.

The main sources of friction between partners are :

1. Misunderstandings between the parties to the project stemming from differences in cultural and political backgrounds;

2. Differences in work habits, perceptions, and productivity;

3. Excessive dependence on specific parties for particular functions such as the foreign partner for technical inputs.

Amongst the key internal issues leading to conflicts is the frequent misunderstandings between local, foreign, and host government personnel with regard to day-to-day operation of the enterprise. This issue may be exacerbated by deficiencies in management and technical skills and the imbalance in the individual perception of power within the joint venture. This friction, apparent in many cases, could be attributed perhaps to differences in business attitudes, policies and cultural backgrounds. For this reason, the selection of the joint venture partners is of paramount importance to the success of the operation. Even when such problems inevitably arise, they can be dealt with promptly, partly through well organised personnel training sessions (with perhaps a larger contribution from the more experienced foreign partner), and partly through commonsense and the cooperative spirit on behalf of all partners. Clearly, the problem of cultural and business attitudes should be far less prevalent amongst potential South-South joint ventures, owing to similarities in the backgrounds of the partners. Fundamentally, it is essential to realise the very real possibility of partners disagreeing or diverging on policy within the joint venture framework, and that each partner must be willing to invest time to comprehend, adjust and negotiate out the problems. Unilateral decisions, regardless of the economic justifications and management judgements behind them, seldom solve probles in within such joint ventures.

Partially in connection with the above issue is the question of below-par work performance of local personnel owing to differences in working habits and attitudes, and perhaps dissatisfaction with the quality of work and salary scales relative to the (often foreign) managers. Once again, this is a common problem to many forms of business activity and the correct training of staff and personnel welfare policies can avert strikes, job losses and general disruptions within joint ventures. It may also help reduce high turnover rates amongst employees.

Given the importance attributed to the technological advantages posed by the joint venture process, the dependence on one partner, usually the foreign partner, for technological developments and managerial skills could be a significant source of friction between partners at a later stage of the venture. The holding of a virtual monopoly on different functions of the venture for any great length of time could create dissatisfaction amongst partners.The interpretation of technological improvements and the plans for expansion and diversification have in numerous cases led to disagreement between partners. This has revolved around the direction of improvement and indeed the nature of the innovation itself. Often the foreign partner has not shown enthusiasm, and therefore the essential support, for the call by the local partner for introduction of new techniques and equipment as the enterprise matures.

Local partners and host governments must be on guard against the possible dumping of outdated or inappropriate equipment and methods by a foreign partner who may be interested in diverting unwanted technology. Given that the technology required in the establishment of fertilizer plants need not be highly sophisticated, and yet sufficiently advanced so as to maximise the use of the feedstocks, care should be exercised in its selection. With regard to diversification of the enterprise, appropriate policy steps should be integrated into the statement of objectives in the early phases of the project, thereby obtaining the guarantee of all partners in cooperation. Unanticipated changes must necessarily be discussed at the current time and in the appropriate cooperative spirit by all the partners, purely in the interests of the joint venture enterprise itself.

With regard to possible external problems facing the joint venture, several points needed to be made.

Local government, though it may be supportive towards a joint venture and provide investment incentives, can be a major source of conflict. Given the magnitude of this issue and the prime importance of government policy in the joint venture project, it will be discussed in greater depth.

A further external problem is the process of localisation or, as is commonly termed, "Indonesianization" or "Indianization". This refers to the desire voiced by many developing country governments to introduce as much a local (or national) elements, especially by way of human resources as is possible, giving the enterprise a distinctly national flavour. It forms in reaction to the fear of a wholly foreign dominated enterprise. As a result, it seems realistic to allow in the articles of incorporation of the joint venture for the gradual phasing out of foreign inputs and enabling the host partner to gain more control of the enterprise within his environment as his skills and experience progresses.

The fear of restrictive policies imposed after the formulation of the joint venture proposal and after the securing of the investment by the host country, is a major source of concern to the foreign partner. From the viewpoint of the foreign investor, this forms a part of the political risk or instability factor which conditions the attitude lent to the joint venture. As such, it is essential that the government policies and guarantees are made credible over time in order to enhance confidence in this and other prospective joint venture agreements.

In general, the need for the careful planning of the proposed joint venture project can not be underestimated. The feasibilty studies prior to the formal establishment of the enterprise, the selection of appropriately qualified partners, the negotiation of the objectives, composition and implementation of the project and the successful integration of this project into the host environment, all demand considerable forethought, expertise, and time (-the average joint venture takes seven years before industrial production can commence).

Three major guidelines need to be adhered to in the early stages of formulation in order that the enterprise minimises potential conflicts and complications :

a. The awareness of adequate pre-planning;
b. The need to ensure continuing interest and flexibilty of operation;
c. The importance of policy agreement.

The first of these requires the understanding that attention must be given to the practical functioning of the operation, and the notion of skill application, and general business appreciation. Joint ventures are complex and useful tools but need to be sharpened on the whetstones of business principles and not created merely, for example, to carve out markets for host economies.

Regarding the second point, partners must be prepared to work out a problem in a flexible operating environment.

Thirdly, the general experience points to a number of problems over dividend policies, capital increases, investment plans and transfer prices if materials and services are provided by one partner. In addition, any action by a partner to threaten the venture's self determination (by, for example, flexing its activities to fit the operations of the parent corporations global marketing and production strategies) could generate very serious reprecussions on the future of the joint venture itself. For this reason, the element of policy agreement at the outset and the need to sustain favourable business relationships between partners are crucial contributors to the spirit of negotiation, which must be made over conflict areas during the course of every joint venture.

In this setting, the host government clearly has a very definite contribution to offer. In the following chapter, an attempt will be made to examine this contribution to the success and failure of joint venture enterprises.

The Role Of Government Policy

The influence of host government policies and interests plays a integral part in all aspects of joint venture agreements in the developing regions. Regardless of the form a joint venture may take, and irrespective of whether the partners include the national government or its representatives in public sector organizations, the project must take into consideration the presence of direct and indirect political factors which affect the joint venture equation. This can be seen by the fact that the venture, necessarily, comes into contact with the host government in the following areas :

a. In national and regional industrial policies;

b. In foreign investment legislation;

c. In the import and export policies of the host country;

d. Through financial rules and regulations, policies on fund raising and equity;

e. In restrictive trade practices legislation.

The leniency which has been shown in the last two decades by developing country governments such as that of India towards foreign investment, especially in the form of joint venture agreements, have been particularly encouraging. Such encouragement and continued governmental support for joint venture proposals is essential. Private joint venture agreements stand little chance of succeeding without the prior blessing of the host government.

At the same time, governments must respect the integrity and freedoms of the joint ventures themselves, and to exact too many restrictions or demands in the national interest would be to thwart potential foreign investment, dampen the stimulation of economic activity at home, and impose immediate obstacles on the successful achievement of the joint venture objectives.

Clearly, there is a need to take sufficient steps to observe the performance of the enterprise and to ensure that some contribution to the host economy is made, and protect any blantant use of valuable national resources.

And, wherever possible, joint venture agreements should be integrated into national or regional industrial policies in order to prevent undue economic imbalance between regions. More specifically, they should be targeted at particular sectors of the economy. This latter feature has not been evident in many developing economies, perhaps for primarily internal political reasons.

In terms of the investment, trading practices, financial and equity policies, the host government has considerable authority in its relationship with the joint venture partners. The imposition of legislation on equity holdings; the wielding of taxes on end products; government assistance in the form of subsidies, support prices, and credit terms; government attitudes to pricing agreements and restrictive trading practices; and legislation on safety and quality control, all affect the joint venture's operations.

The government may also participate in the purchasing function, buying fertilizer from the venture and distributing the product via its marketing agencies. In addition, the government control of feedstock prices is crucial to the joint venture.

The role of such governmental agencies and trading bodies also influence the enterprise and the host could contribute to the success of the enterprise through making available national reseach and development facilities, together with agreements (as evidenced in the South American region in the ferilizer industry) with national transport and distribution networks.

A further governmental contribution could be to assist inexperienced local partners with the process of selecting appropriately qualified and well placed foreign partners for joint venture projects. This would involve the establishment of a database and support services, and it would be especially justified for cooperation on a regional basis. Such institutional support is evidenced in Brazil and Argentina, but is uncommon in most other developing regions. In Argentina, Brazil, and Mexico, the governments have also established institutions such as the Instituto Nacional de Technologica (Argentina), or the Instituto Nacional da Propriedade Industrial (Brazil) in order to handle the required registration and approval of joint venture enterprises.

Besides the element of control imposed on joint ventures by these institutions on behalf of host governments, these institutions can assist joint venture proposals in research and development and act as a third party in negotiations. However, they also play an observer's role in that they are empowered to demand information on the economic activities of the joint venture. More developing region governments could utilise such arrangements in the process of attracting and establishing cooperation for fertilizer production plants.

Incentives in the importing and exporting fields are another area in which host governments could make their contribution better felt. A reduction in import duties on materials vital to the joint venture as against competition may in some cases be justified in the short term. In the export sector, room for preferential trading agreements should be allowed with parties linked to the joint venture.

From the viewpoint of the local and foreign partners, harmonious relations with the government and other political groups is much desired. This would facilitate the legal and external adminstrative dealings considerably, and prevent the polarization of views which so often brings about the downfall of a joint venture enterprise.

Whilst taking care to maintain cordial relations and, in a spirit of goodwill, advising the host government perhaps annually of general business performance, the joint venture partners must take care to preserve their operational independence and secure the maximum cooperation from the government and public sector bodies. It is only by cultivating a favourable relationship with the government authorities that the joint venture may reasonably expect the government to appreciate and understand potential problems and pitfalls unique to joint ventures and offer a sympathetic stance during such periods.

Essentially, the host government plays a protective role in joint venture agreements, acting in the national interest and in support of local partners who may be less dominant than the foreign participant in many joint venture relationships. Even in the case of private sector projects, an element of governmental supervison is probably required. However, the issue of the degree of government involvment which is appropriate, particularly indirectly, is a controversial topic which warrants a separate analysis of individual national policies, the political system, and social and economic developments in each developing nation.

V. Conclusion And The Outlook For Joint Ventures In The Fertilizer Industry

This final chapter focusses on the development of joint venture agreements in the fertilizer industry in developing countries. It seeks to provide some general guidelines to parties in such projects, based on the analysis of successful joint venture arrangements in the sector.

The chapter addresses the following issues :

1. Objectives for host governments in promoting joint ventures;

2. Objectives for local partners in attracting and sustaining successful partnerships through joint venture agreements;

3. Objectives and considerations for foreign partners.

Prior to the formulation of the guidelines, it is helpful to outline in brief the procedure for the initiation and establishment of the joint venture agreement.

The concept of the joint venture project is usually initiated by one of the potential partners, and then developed into a framework which is more coherent for discussion purposes.

Following the selection of possible partners and the identification of individual interests, as well as a general appreciation of the economic, political, and social climate within which the venture is proposed, a letter of understanding or notice of intent is signed.

This paves the way for pre and feasibility studies where details such as the processes to be used, feedstock and fuel supplies, infrastructure, site, alternative financial packages and cost benefit analyses are carried out. These together form the basis of the joint venture agreement, its articles of incorporation, and licensing and marketing agreements between partners.

In this manner, the venture is established. From a host country's viewpoint, the important elements in the collaboration lie in finance, technology transfer, marketing, technical assistance, and research and development.

The draft contract, and the nature of agreements entered into by the partners depends largely on the laws and regulations present in the host country economy. For this reason, the host government, as emphasised earlier, plays a critical role in the successful promotion and continuation of joint venture agreements.

The following guidelines attempt to highlight the key areas in which government cooperation could be greatly beneficial to this form of enterprise. Following this, an outline of the importance of regional joint ventures, is attempted.

1. Government Objectives For Promoting Joint Venture Agreements

The laws and regulations which directly and indirectly affect joint venture operation can generally be attributed to the following broad classifications :

a. Industrial Policy : a regulatory mechanism designed to provide companies with a framework within which the government expects industrial development to take place;

b. Foreign Investment Legislation : these laws determine the extent and nature of foreign economic participation;

c. Restrictive Trade Practices Regulations : a set of rules limiting the monopoly power of corporations;

d. Financial Rules : a series of financial rules and regulations affecting the finacial operation of the joint venture. They include corporate taxes, excess profits taxes, income tax, profit repatriation;

e. Policies On Credit Raising And Loans : guidelines including specific instructions on raising capital for joint ventures;

f. Import Policy : a comprehensive policy on incentives for importing capital goods, machinery, and spare parts, and on the protection afforded to local fertilizer manufacturers against the import of similar products from outside.

g. Export Policy : a policy to encourage the export of fertilizers, and also the provision of incentives to preferential commercial dealings.

Within these laws and regulations, the host government could set policy objectives to enhance the initiation of new fertilizer joint ventures and sustain existing ones in the following areas :

i. The control and assurances in the supply and pricing of raw materials and feedstocks to the project;

ii. The monitoring of the technology involved in the project, as well as the effectiveness of this transfer process. In addition an evaluation of the real motives of foreign partners with respect to the transfer is desireable;

iii. The integration of joint ventures into national industrial policies;

iv. The provision of facilities in the marketing, distribution and transportation sectors, in particular the assistance of government trading agencies and national networks. In an effort to promote regional ventures, the establishment of a central database on essential requirements for the joint venture process is warranted;

v. There is an increasingly important need for the host governments to further their negotiation skills within the joint venture process.

In terms of the control and assurances in the supply and pricing of raw material inputs to the joint venture, the host government can exert a very strong pull on the entire operation of the project. Indeed this is an area where the government must strive to maintain confidence in its ability to maintain stable input prices. The foreign partners have shown a tendency to fear indecision on behalf of the government, when after initial guarentees and the consequent establishment of the project, the government has changed input prices, resulting in some cases in throwing the project economics into disarray.

The monitoring by the government of technology employed, and on the effectiveness of the technical transfer process, can be a welcome source of support for the local partner. It will offer precautions against technological dumping of obsolete foreign equipment. This aspect of government policy will intrude to an extent on the business freedoms of the enterprise. Nevertheless, in the case of many developing country local partners when the resources and facilities necessary to enable such technical checks to be made are lacking, the government may be the only party with the required facilities, capable of reliable advice.

In this connection, the host government should, as a policy rule, make available the use of technological research institutes for participants of fertilizer and other joint ventures which are often too immature to establish their own.

A further point concerns the necessity in overseeing that foreign investment should have only well reasoned commercial motives and not be a means of making the venture dependent on the partner's wider global interests.

A policy guideline on the monitoring and evaluation of progress is useful in the context of fertilizer joint ventures. Experience indicates that these procedures are inadequate in many developing regions. The aim of these would be to see if the terms of the joint venture agreement are being adhered to in spirit, and not simply by letter, and to observe any serious deviations or malpractices present which are contrary to the expectations at the formulation of the agreement. Governments should establish and review continuously appropriate systems and techniques for these functions, so that joint venture undertakings could be made to agree with national interests continuously.

The government should ensure that wherever possible joint venture agreements also serve as a vehicle of manpower development at all levels. This assists the local economy to acquire new skills and knowledge.

Related to the above point is the need for the host government to coordinate the development of an educational infrastructure on which it can build a national technological base. This feature may, in particular, benefit joint ventures on a regional outlook, as in the case of the ASEAN Indonesia Fertilizer Project.

The host government must ensure that future joint venture agreements provide for the fade-out of equity participation by the foreign partner, thus according the local partner with increased responsibilities. Compensation trading arrangements could be arranged for foreign partners. As an alternative, there may be arguments for increasing - rather than decreasing - equity ventures whereby the partners may be offered, at a prearranged stage of the project, an opportunity to increase (buy-back) their share of equity. Proponents of this policy argue that this will enhance the competitive nature of successful ventures and be a further stimulus to business.

The provision of national facilities and networks for the use of joint venture projects is particularly striking in the case of the Latin American region. The role of government research and development institutes, government trading agencies, national marketing and distribution networks, all play a critical role in the encouragement of joint ventures. The widespread knowledge and use of such national sources is not commonplace, and collaboration in the fertilizer industry amongst the Latin American countries seem the main example.

The establishment of a regional database in order to encourage regional joint venture formation could be a useful and time saving action on behalf of government policy. This centralization of a wide range of essential information can dramatically hasten the average period of seven years usually required for the project to come on-stream.

In terms of negotiation skills, it is essential that in the forthcoming decades, the host governments acquire these skills which enables them to be on par with the foreign partner of a project. The developing country economists display, usually, relatively poor negotiation skills, and this could be corrected through appropriate government action. Negotiation skills on the issues of technological acquisitions, and financial affairs must be conducted skillfully in order for the developing nation to obtain the most favourable terms. Help over such training could be sought from other developing neighbours or international organizations and consultants.

This section has so far dealt with suggestions for general governmental guidelines concerning fertilizer joint ventures. It is in order now to examine the importance of government policy relevant to regional joint venture promotion efforts.

Within the fertilizer industry, joint venture agreements on a regional cooperation basis may prove an especially productive tool in fulfilling aggregate demand for fertilizers, and contributing to general regional economic development. This assertion is based mainly in the observation that the achievement of economies of scale in production, storage, marketing and distribution will, ceteris paribus, result ultimately in higher profit margins and higher levels of economic efficiency. A higher level of aggregate regional demand would warrant a larger sized plant, and provided a high utilization rate is maintained, a lowering in the costs of production could be ensured.

Regionally incorporated joint ventures will enable the drawing on widespread regional resources to fulfill national and international demand competitively. This circumvents the problems faced by individual nations in the lack of one or another input. It also reduces the incidence of cases in the past when governments have been so engrossed in their own plans for developing their technology for internal technical transfers, as well as increasing sales to local markets, that they have had neither the opportunity nor finance to organize operations at a regional or international level. Moreover, this has made individual countries more susceptible to internal and external risks. The effective shelving of the State Fertilizer Manufacturing Corporation of Sri Lanka in 1985 owing to the escalating costs of imported naphtha and inability to compete with natural gas based fertilizers of the Middle East, is a case in point.

Until relatively recently, most developing country governments have ignored the benefits of large scale production made with the cooperation of regional enterprises and governments. Moreover, having made little attempt to compete regionally in the sale of acquired and indigenised know-how and experience, they have tone down to create the opportunities needed to match international competition in technical and commercial sectors. As a result of the lack of information-sharing, countries have also become isolated, with each spending considerable sums of scarce national resources, perhaps uneconomically, for the same purpose.

Yet, it is important to emphasise that in the last decade changes have been apparent as more regional interaction has got under way. Some nations especially India and Saudi Arabia have deliberately encouraged (through special legislation) local firms to embark on joint venture agreements. A few others have established some engineering and consultancy services which have played a role in the construction of fertilizer plants. In addition, regional cooperation in the fertilizer industry through ASEAN and ANCOM have emerged.

In instances where joint ventures, be they private public or government projects, are proposed for the establishment of a fertilizer plant, there must exist the means by which an appraisal of the needs and facilities in a regional partner could be made. Similarly, information on potential partners could be assimilated to enable quicker and more upto date access to data. The creation of a regional database, as proposed by UNIDO in the petrochemical industry seems a solution to this issue. This could contain a range of services available to joint venture projects, a directory of technological capabilities, a world supply and demand analysis (including professional and industrial services offered), essential market information, and a list of potential partners, their qualifications, interests, and track record.

Cooperation amongst regional partners on technical matters through centrallised research and development facilities and frequent symposiums may assist in overcoming the logistical and technical problems associated with setting up fertilizer joint ventures. The main initial input to such measures would come from foreign industriallised sources, be they TNCs or foreign governmental assistance, but the subsequent development of this information would lie with such regionally incorporated bodies. Given that many regional partners often share common problems in economic development, it would be possible to orientate the new technolgy to suit the special needs of the developing countries.

Besides cooperation over technical matters, cooperation in marketing and raw material supplies plays an equally significant role. Foreign skills will prove valuable in this sector, especially the marketing knowledge of the larger international corporations. However, such skills will not be easily obtained if they are thought to be detrimental to the interests of the foreign donors themselves. Governmental negotiation will play a major role in offering concessions in return for valued inputs and such inputs should be examined with relevance to the needs and regional environment in order to maximise the impact of joint venture agreements. Clearly, a certain element of internal political friction may be evident in such intra-regional dealings but it is in the interests of all to share and benefit from this information.

2. Objectives For Local Partners

This section examines:

a. The position of the local partner with respect to other parties in the venture,

b. A suggestion of some important guidelines which are instrumental in achieving a successful joint venture.

In many joint venture relationships, the local partner is more inexperienced and has less financial strength than the foreign partner. In such a situation, the local partner may need an alternative source of assistance, separate to the foreign partner. Given the limited resources at its disposal, the local partner should then not hesitate in seeking the cooperation of the host government in issues such as an evaluation of technology and technical knowledge transfer from the foreign partner.

However, for such national cooperation to take place, it falls to the host government to take the necessary steps to generate confidence in government cooperation, its dependability, and its advice. For this reason, the previous section has suggested the encouragement of more links between the host government and local industry, through the offer of national facilities available for potential and existing joint venture participants.

With joint venture agreements, the local partner should pay particular attention in future to the following areas :

1. The areas of plant operations;
2. Maintenance and spare parts;
3. Technical services and personnel training;
4. Research and development.

Whilst these areas pertain to both private and regional cooperation efforts, in the case of the former there may be greater possibilities of mismanagement or domination of the project by one partner.

Effective operation of the fertilizer plants is essential in lowering costs of production and enhancing competitiveness. Moreover, lack of operating experience and poor training of key personnel contribute little to optimum capacity operation (which helps reduce costs of production) and this characteristic can be observed in many developing economies.

Maintenance of established plants is critical in reducing overhead costs in the long term. Climatic conditions in many developing regions may be relatively harsh, requiring predictive and preventive maintenance. The foreign partner or independent foreign service organizations, often with sound experience in this field, should provide assistance in this sector for a set period, but for the future of the joint venture, well organised training programs for local staff is vital. The efficient provision of spare components and ancillary materials will assist in overall maintenance objectives.

Technical services, ranging from trouble shooting, quality control programs, and feedstock and process monitoring, are critical to the operation. With locally initiated fertilizer plants, the lack of technically skilled operators are a common problem in many developing regions. Temporary assistance, together with long term training is necessary through the joint venture agreement.

Research and development, as outlined earlier, are important in keeping fertilizer plants upto date and contribute in giving more momentum to local developments once the official joint venture agreement lapses.

Besides the guidelines suggested in the these four areas, the local partner must ensure that a clear and precise declaration of the joint venture objectives is drawn up at the outset of the project. This is necessary to maintain the enterprise on a predefined, but flexible, course of action. Such a course must have the mutual agreement of all the partners and appropriate initial steps for dealing with extraordinary circumstances and problems should be provisionally established.

The expected benefits to all partners should be clearly identified and articulated at the negotiation stage.

Furthermore the joint venture objectives must be formulated directly with the fertilizer needs of the host country in mind. The local partner, in particular, should be authorized to search for the best terms and prices in the purchasing of raw material inputs, and not be constrained by pressure from either the host government or foreign partner.

3. Objectives And Considerations For The Foreign Partner

This final section will examine guidelines for the foreign partner's role in the fertilizer joint venture proposal and ways in which its input could be made more effective. The following general areas are considered :

a. Importance of a well organised and defined corporate structure;

b. Project implementational features;

c. Planning for localization;

d. Assistance in training personnel;

e. Seeking operational efficiency;

f. The need for marketing and sales support.

From the viewpoint of foreign partners, one of the attractions of joint venture enterprises in developing regions is that there is opportunity to agree on and define a clear and well structured project from the initiation of the business idea. Thus, in the process of establishing a working agreement, the foreign partner should utilise its valuable managerial and legal experience to ensure that the venture is covered by the proper and adequate legal framework, designed to secure the optimum business performance. This would minimise the likelihood of differences in opinion on the essential elements of the operation and contribute to a stronger and leaner enterprise.

In terms of implementation, its assistance in collaboration with suggestion from the local partner should lead to the project being established on appropriate technology with projected cost and time scheduling. The use of local capabilities in design, engineering, equipment supply and also help in construction should be maximised without risk to infringing the project objectives, and without damaging the shareholders' interests.

Foreign partnerships in developing country project must be aware of changing socio-political environments, and plan their long term policy to be geared towards the localization of management in stage by stage basis. Agreement on this important area should be clarified in the initial agreement. Preference in hiring personnel may be given, where possible, to the local labour pool, and this becomes important especially in instances where projects are established with the desire to improve a country's regional economy in mind.

Training is a major feature of foreign involvement for it is hoped that new skills would be introduced to a region through joint venture employment. Adequate training should be provided to ensure sate and optimum operation of fertilizer plants. Properly trained personnel could be instrumental in saving a substantial amount annually in plant maintenance, particularly in locations suspectible to climatic extremes where high rates of material and machinery depreciation may be common.

In terms of plant operation, the desirability in operating on the highest possible on-stream factor can not be emphasised adequately. It is necessary to seek high utilization rates in order to minimise the costs of production and thereby offer a competitive product. Clearly, the regular uniterrupted supply of feedstocks at attractive prices is vital, and the host government may be influencial in this area.

The foreign partner's expertise in marketing and sales could be a major asset to a venture, provided that it is relatively free from other intentions of the partner. Assistance in establishing an entry into markets overseas (assuming local demands are satisfied) is vital to the continued functioning of the joint venture. Within the host economy, the local partner may be the main source of marketing power through its awareness of the prevailing environment.

From the preceding chapters, it should be increasingly evident that joint venture enterprise is generally well suited to play a more prominent role in the progress of the developing world. The diagrams in Appendix 1 Table 3 depict the fact that the highest fertilizer production and consumption growth rates for the 1979/80 to 1984/85 period are attributed to the developing economies. This is indicative of the future potential for expansion through joint venture agreements in this sector.

However, inspite of the potential usefulness of joint venture agreements in the fertilizer industry of the developing world, this can not be realised without the support of two critical factors.

Firstly, the host government must, where possible, target, promote and continuously support joint venture agreements in specific sectors and regions within the country. In this, internal political inhibitions must be made to take a secondary place to stimulating economic activity within the overall framework of industrial policies.

Secondly, the production outputs must be primarily geared to fulfilling national demands, prior to seeking export markets abroad. Moreover, it is necessary to support the efforts of the joint venture enterprise with a suitable domestic agricultural policy which forms a link between the output of the plant and its arrival on the farmer's hands. Government assistance in the provision of a fertilizer subsidy may be welcome in the start-up period of the venture when high overall costs of production are inevitable.

If, within these guidelines, a favourable climate of sustained cooperation and negotiation can be established between the local partner, the foreign partner, and the host government, and the need to operate efficiently in a specifc country environment is acknowledged, then joint ventures in the fertilizer industry potentially have a very useful future in alleviating the problems of hunger in the developing economies of the world.

APPENDIX I AND II

A Review Of Recent Joint Ventures In The Fertilizer Industry Of The Developing Regions

Commercially Orientated Joint Ventures

1. Pakistan - Dawood-Hercules

Partners : Local - Dawood
Foreign - Hercules Chemicals (USA)
Capacity : 160,000 tons of nitrogen as ammonia per year
Products : Urea
Market :

Following the Pakistani Government's encouragement of joint ventures in establishing fertilizer plants, this project between Dawood and Hercules Chemicals (USA) was initiated largely in order to use the abundant local natural gas supplies. It has operated successfully, without expanding, for many years.

2. Pakistan - Exxon

Partners : Local -
Foreign - Exxon (USA)
Capacity : 80,000 tons of nitrogen as ammonia per year
Products : Urea
Market : Local

This is a private joint venture representing Exxon's interests in the fertilizer industry. The plant has been successfully serving the local urea market for many years.

3. Qatar - Qatar Fertiliser Company

Partners : Local - Qatar Government
Foreign - Norsk Hydro (Norway)
Capacity : 1800 tons ammonia & 2000 tons urea per day
Products : Urea
Market :

The Norwegian fertilizer producer, Norsk Hydro, proposed the establishment of a joint venture plant with the Qatar Government. Norsk Hydro is a financial partner, provides the management as well as the technical services, and markets the products.

4. Ruwais Fertilizer Industries (Fertil)

Partners : Local - Abu Dhabi National Oil Company (ADNOC)
Foreign - French Petroleum Company (CFP), Mitsubishi (Japan)
Capacity : 1000 tons ammonia, 1500 tons urea per day
Products : Urea
Market : Export

This was initiated by the Abu Dhabi National Oil Company (ADNOC), with the cooperation of the French Petroleum Company (CFP). The whole output will be exported, with Mitsubishi of Japan handling sales operations.

5. India - Zuari Agro Chemicals

Partners : Local - IFC, Baila
Foreign - US Steel Company
Capacity :
Products : Ammonia - urea - NPK
Market : Local

The United States Steel Company provided part of the investment capital and technical support in this private ammonia-urea - NPK unit built in Goa. The IFC and Baila's also contributed capital and technical inputs. Raw materials such as phosphoric acid (Mexico) and potash are imported, but naphtha is obtained through local sources.

6. India - Coromandel Fertilizers

Partners : Local -
Foreign - International Minerals & Chemicals (IMC), Chevron
Capacity :
Products : Ammonia - urea - NPK
Market : Local

This private joint venture was established through the efforts of International Minerals and Chemicals (IMC) (USA) and Chevron (USA), and is located on the esat coast at Visakhapatanam. It is an ammonia-urea - NPK plant, using local phosphoric acid made from phosphate rock imported from IMC in the US.

7. India - Madras Fertilizers

Partners : Local - Indian Government
Foreign - AMOCO (USA), National Iranian Oil Company
Capacity :
Products : Ammonia - urea - NPK
Market : Local

This public company was promoted by the Indian government with AMOCO of the USA and the National Iranian Oil Company. The latter has links with a near-by oil refinery from which naphtha for ammonia production is obtained for this venture. Phosphoric acid for the ammonia-urea - NPK production is imported from Mexico. AMOCO initially managed the venture but now the Indian government is in control.

8. Nigeria - Kellogg

Partners : Local - Nigerian Government
Foreign - Kellogg (USA)
Capacity :
Products : Ammonia - urea
Market : Local

Kellogg, an international engineering company with extensive experience in ammonia plant construction, has participated with other companies in this joint venture with the Nigerian Government to build and operate an ammonia - urea unit based on local natural gas. The companies have also jointly established a marketing system. Despite some initial delays, the plant will initiate production in 1988/89.

Government to Government Joint Ventures

1. Pakistan - Pak-Arab Fertiliser Company

Partners : Local - National Fertilizer Company (NFC)
Foreign - National Oil Company (Abu Dhabi)
Capacity : 1000 tons ammonia, urea
Products : Nitrophosphate, calcium ammonium nitrate
Market : Local

The Pakistani Government established the National Fertilizer Corporation of Pakistan (NFC) largely in order to promote joint venture projects and fulfill Pakistan's increasing demand for fertilzers. The NFC is a holding company and it encouraged the Pak - Arab Fertilizer company to modernize and expand a plant initially built with French aid. The Abu Dhabi government, through its National Oil Company, is a 48% equity partner in this venture, which in addition to Pakistan government equity assistance and underwriting of foreign credit, has obtained credit from the World bank, the Asian Development Bank, the OPEC Special Fund, and several US banks.

Although the involvement by Abu Dhabi in this venture may be seen as a part of a commerical joint venture agreement, it has no need of the fertilzers and could build its own unit using local gas sources. Hence, the project is seen as a part of intergovernmental aid. The plant consists of a 1000 tons per day ammonia unit and associated urea, nitrophosphate and calcium ammonium nitrate units.

2. Pakistan - Pak-Saudi Fertilisers

Partners : Local - National Fertilizer Company (NFC)
Foreign - Saudi Arabian Government
Capacity : 1000 tons ammonia, 1740 tons urea per day
Products : Ammonia, urea
Market : Local

This more recent venture was financed by equity held by the NFC of Pakistan and loans from the Saudi Arabian Government, the Saudi Development Fund, and the Asian Development Bank. Rupee loans at subsidized rates werealso available by the NFC.

3. Pakistan - Hazara Urea Fertiliser Plant

Partners : Local - National Fertilizer Corporation (NFC)
Foreign - China
Capacity : 200 tons Ammonia per day
Products : Ammonia, urea
Market : Local

The NFC held all equity shares of this project which came on-stream in 1982 with half its total costs of construction (RS 760 million) being paid through Chinese aid. China also provided technical help and the plant produces 200 tons of ammonia per day.

4. India - India-Nauru Paradeep Phosphates Ltd.

Partners : Local - Indian Government
Foreign - Government of Nauru
Capacity : 2000 tons sulphuric acid, 750 tons phosphoric acid, 2400 tons ammonia per day

Products : sulphuric acid, phosphoric acid, ammonia
Market : Local

This joint venture was established for the production of phosphatic fertilizers as a result of close cooperation between the governments of India and Nauru. Nauru acquired a 40% equity holding and a proportionate share of managerial functions. The project used phosphate rock reserves of Nauru whilst the output was intended wholly for Indian local consumption. The unit capacity was 2000 tons of sulphuric acid, 750 tons of phosphoric acid, and 2400 tons of ammonia per day. Progress has been steady and very satisfactory.

Raw Material Influenced Joint Ventures

1. Tunisia - Societe Arabe des Engrais Phosphates et Azotes

Partners : Local - Tunisia
Foreign - Abu Dhabi Government
Capacity : 1000 tons phosphoric acid, diammonium phosphate, nitric acid, ammonium nitrate per day
Products : Phosphatic fertilizers
Market : Mainly export

This joint venture with the government of Abu Dhabi sought to exploit Tunisia's ample supplies of phosphate rock in the production of 1000 tons per day of phosphoric acid, diammonium phosphate, nitric acid, and ammonium nitrate. The foreign partner (Abu Dhabi) holds 40% equity share.

2. Tunisia - Industrie Chimique Maghrebine (ICM)

Partners : Local - Industrie Chimique Maghrebine
Foreign - Kuwaut Petro Chemicals Industries
Capacity : 1000 tons diammonium phosphate
Products :
Market : Export

ICM, a new Arab company, sought in a joint venture with Kuwait Petro Chaemicals Industries Company to produce 1000 tons per day of diammonium phosphate using phosphoric acid produced by ICM and ammonia imported from the Kuwaiti partner.

3. Tanzania - Kilwa Ammonia Company Ltd.

Partners : Local - Government of Tanzania
Foreign - AGRICO company USA
Capacity : 366,000 tons ammonia per year
Products : Ammonia, urea
Market : Mainly export

The Tanzanian Government, in a joint agreement with Agrico USA, built an ammonia - urea complex using new local sources of natural gas. Agrico has a 26% equity interest, and supplies management and technical support, in addition to undertaking export marketing. Tanzania's local demand is small although it could increase rapidly in the future.

4. Saudi Arabia

Saudi Arabia is developing a major industrial area at Al-Jubail with port facilities. In connection, it has planned several industrial joint ventures

here with Saudi Basic Indu ies (SABIC), two of which are for fertilizer plants. These will use lo . gas supplies. One of them, an ammonia - urea complex owned 50% by SAF.C and 50% by China, started in 1983 and has devoted 60% of its output to China. The other, will probably involve Indian assistance in construction and will cater also wholly to the Indian market.

5. Korea - Namhae Chemical Corporation

Partners : Local - several local interests
Foreign - AGRICO company USA

Capacity :
Products : Diammonium phosphate, urea, granular compounds
Market : Mainly local

This was a large project between several local interests and Agrico (- a major US phosphate rock and fertilizer producer). Agrico desired a large, steady market for its rock production and also for the finished products of diammonium phosphate, urea, and granular compounds in the Near and Far East. Agrico has 25% share in the project and supplies phosphate rock, technical services, and full export management support. As in the case of Sri Lanka, owing to the high cost of naphtha, the ammonia unit was closed and ammonia requirements for the manufacture of different fertilizer products imported.

6. Trinidad and Tobago

Agico assisted the National Commission on Energy in the construction of an ammonia - urea complex using local gas reserves. Agrico provides technical and marketing support.

7. Trinidad and Tobago - Grace

Partners : Local - Government of Traindad and Tobago
Foreign - W.R.Grace & Co. (USA)
Capacity : 900,000 tons per year
Products : Ammonia
Market : Mainly local

The Trinidad Nitrogen Co. operates an ammonia plant jointly owned between the above local and foreign partners in a 51% and 49% equity share. The plant was due to expand from 400,000 to 900,000 tons of ammonia by early 19888, at a cost of US$ 250 million.

8. Pakistan - Pan Islamic Chemical Company

Partners : Local - Pan Islamic Chemical Company (PICC)
Foreign - Jordanian Government
Capacity : 825,000 tons diammonium phosphate per year
Products : Diammonium phosphate
Market : Local

Pakistan is hoping to utilise more of its phosphate reserves for the manufacture of phosphate fertilizers. In a joint venture, the PICC has proposed the production of diammonium phosphate using locally produced ammonia and imported phosphoric acid from Jordan.

9. Sri Lanka - Agrico

Partners : Local - Sri Lankan Government.

Foreign - Agrico (USA)
Capacity : 530,000 tons diammonium phosphate and 50,000 tons triple superphosphate per year
Products : Diammonium phosphate, triple superphosphate
Market : Mostly export

In another venture seeking to exploit local phosphate rock reserves (estimated at 60 million tons), discussion was under way for this joint venture. Estimated cost : US$ 380 million.

10. Philippines - Philippine Phosphate Fertilizer Corporation (PHILPHOS)

Partners : Local - National Development Corporation (NDC)
Foreign - Republic of Nauru
Capacity : 169,000 tons ammonium sulphate, 965,000 tons NPK granulated compounds per year
Products : ammonium sulphate, NPK granulated compounds
Market : Local

This was a project to establish a fertilizer plant of four units : to produce sulphuric acid, phosphoric acid, ammonium sulphate, and granular compound fertilizers. The phosphate rock is imported from Nauru, and the sulphuric acid will be obtained from a local copper smelter. The Company is capitalised at US$ 100 million, with US$ 60 million subscribed by the NDC and US$ 40 million by the Government of Nauru. Total cost : US$ 350 million. The project was to be commissioned in 1985. It is reported that this Corporation may be privatised in the near future.

11. India - Indo Nauru Project

Partners : Local - Indian Government
Foreign - Republic of Nauru through Nauru Phosphate Co.
Capacity : 1000 tons diammonium phosphate per day
Products : Diammonium phosphate
Market : Local

The Indian Government holds 60% of equity here, whilst the Nauru Government holds 40% in a venture to produce diammonium phosphate with imported phosphoric acid and ammonia. Later the phosphoric acid will be produced from imported Nauru phosphate rock.

Regional Cooperation Joint Ventures

1. Senegal - Industries Chimiques du Senegal (ICS)

Partners : Governments of Senegal, Cameroons, Ivory Coast, Nigeria, India, the French Mining and Operating Associates, and two Indian fertilizer producers
Capacity : 1900 tons sulphuric acid, 780 tons phosphoric acid per day
Products : Phosphoric acid, fertilizers
Market : Mostly expor.

In 1974 the Senegalese Government initiated a study on the construction of a large scale phosphoric acid and fertilizer plant for on-site processing of phosphate rock. The aim was to produce and export phosphoric acid and fertilizer.

In November 1980, the ICS became an Operational Company with a capital outlay of US$ 53 million, increased by 1981 to US$ 61 million. The first tons of sulphuric acid was produced by December 1983, and the ICS complex was officially opened in April 1984. Loans were obtained from the International Finance Corporation (IFC), the European Investment Bank, the French Bank for Economic Cooperation, the African Development Bank, the OPEC Fund, and the Arab Bank for African Development. The Indian interests in the project hold 19% of equity, but will receive 50% (-100,000 tons) of the annual production of phosphoric acid under a 15 year supply contract

2. Indonesia - ASEAN Fertilizer Project

Partners : The Association of South East Asian Nations, with Indonesia Malaysia, the Philippines, Singapore, and Thailand.
Capacity : 1000 tons ammonia per day
Products : Ammonia - urea
Market : Intra-regional

The ASEAN nations agreed to cooperate in regional development of trade and industry. They have, together, large resources of natural gas, phosphate rock, potash, and by-product sulphuric acid. Moreover, all except Singapore have a dominant agrarian based economy.

A detailed World Bank study on possible regional joint ventures resulted in the first unit built under the ASEAN fertilizer project being located in Indonesia. It was a 1000 ton per day ammonia - urea complex which initiated production in 1984. A similar complex is being built in Malaysia, and a phosphate plant is being constructed in Indonesia.